a crucible divided into a plurality of stages, each stage containing a crystal precursor material; and

a heater arranged to heat said crucible,

wherein each stage of said plurality of stages of said crucible has formed therein a degassing hole in a side wall portion thereof for discharging an impurity gas produced when refining the crystal precursor material by adding a scavenger thereto, and

wherein a lower portion of a first stage of the plurality of stages is positioned to cover an upper edge of a wall portion of a second stage of the plurality of stages, an inner height of each stage of said plurality of stages is 10mm to 50mm, the degassing hole has a diameter of 1mm to 5 mm, and a fluoride crystal is formed from the precursor material.

47. (Amended) A production apparatus according to Claim 45, wherein each stage of said plurality of stages of said crucible has formed therein at least two degassing holes in the wall portion thereof.

49. (Amended) A production apparatus according to Claim 45, wherein each stage of said plurality of stages of said crucible has formed therein a connecting hole at a bottom center portion thereof.

50. (Amended) A production apparatus according to Claim 45, wherein said crucible has a cylindrical shape.

53. (Amended) A production apparatus according to Claim 45, comprising:

a region for receiving a material, said region formed by superimposing a plurality of crucibles; and

wherein the crucible has no connecting hole at the lowermost stage.

Please add new Claims 54-61 as follows:

--54. (New) A production apparatus for producing a crystal, said apparatus comprising:

a crucible containing a crystal precursor material; and

a heater arranged to heat said crucible,

wherein said crucible has formed therein a degassing hole in a side wall portion thereof for discharging an impurity gas produced when refining the crystal precursor material by adding a scavenger thereto, and

wherein a fluoride crystal is formed from the crystal precursor material.

55. (New) A production apparatus according to Claim 54, wherein said crucible has formed therein at least two degassing holes in the side wall portion thereof.

56. (New) A production apparatus according to Claim 54, wherein said crucible has a cylindrical shape.

57. (New) A production apparatus according to Claim 54, wherein said crucible has an inner diameter of at least 250 mm.

58. (New) A production apparatus according to Claim 54, wherein said degassing hole has a diameter of 1 to 5 mm.

59. (New) A production apparatus according to Claim 54, wherein said crucible is divided into a plurality of stages and each stage of said plurality of stages of said crucible has formed therein a degassing hole in a side wall portion thereof for discharging an impurity gas produced when refining the crystal precursor material by adding a scavenger thereto.

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60. (New) A production apparatus for producing a crystal, said apparatus comprising:

a cylindrical crucible containing a crystal precursor material to be refined by adding a scavenger thereto; and

a heater arranged to heat said crucible,

wherein said crucible has a diameter of 0.9 to 0.95 times as large as the diameter of the growth furnace crucible, and a fluoride crystal is formed from the crystal precursor material.